

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for routing a packets in a router having a plurality of interfaces through which the packets are received from a plurality of address domains and having a separate routing table dedicated to each address domain, comprising:

~~dedicating a separate routing table to each domain of a plurality of domains for use in routing packets propagating that domain;~~

~~—receiving the packet from one of the plurality of domains through one of a plurality of interfaces;~~

~~—determining one of the routing tables for the packet according to a mapping array, the mapping array including pointers that associate the interfaces with the routing tables; and~~

~~—updating the determined routing table when the received packet is a control packet, wherein receiving the packet, determining one of the routing tables, and updating the determined routing table are performed by executing a single IP stack~~executing a single IP stack to receive packets from any of the router interfaces and to identify an appropriate routing table for received packets.

2. (Canceled)
3. (Currently Amended) The method of claim 1, wherein ~~the a~~ mapping array associates interfaces connecting to the same address domain with the same routing table.
4. (Currently Amended) The method of claim 1 ~~further comprising, after the one routing table is determined, forwarding the packet according to the one routing table if the packet is a data packet,~~ wherein executing a single IP stack forwards a received packet according to the identified routing table when the received packet is a data packet and updates the identified routing table when the received packet is a control packet.
5. (Canceled)

6. (Original) The method of claim 1 wherein each of the plurality of address domains represents a virtual private network.
7. (Currently Amended) A router comprising:
 - ~~a plurality of separate routing tables, each routing table being dedicated to one of a plurality of address domains for use in routing packets propagating that address domain;~~
 - a plurality of interfaces through which packets from the a plurality of address domains are received;
 - a separate routing table associated with each address domain; and
 - a domain manager, which includes a mapping array for determining one of the routing tables for the received packets, the mapping array including pointers that associate the interfaces with the routing tables, wherein the domain manager is capable of updating a determined routing table and wherein the domain manager executes a single IP stack to receive the packet, determine the one routing table, and update a determined routing table executing a single IP stack to receive packets from any the router interfaces and to identify an appropriate routing table for received packets.
8. (Canceled)
9. (Currently Amended) ~~A The router of claim 7 wherein the mapping array associates interfaces connecting to the same address domain with the same routing table, wherein the domain manager comprises a mapping array that associates each interface to a routing table.~~
10. (Currently Amended) ~~The router of claim 7 wherein the domain manager forwards the packet according to the determined one routing table if the packet is a data packet, wherein the domain manager executing the single stack forwards a received packet according to the identified routing table when the received packet is a data packet and updates the identified routing table when the received packet is a control packet.~~
11. (Canceled)

12. (Original) The router of claim 7 wherein each of the plurality of address domains represents a virtual private network.

13-20. (Canceled)